IN THE CLAIMS:

Please amend the claims as follows:

1. – 6. (Canceled)

7. (New) A micro-electro-mechanical system (MEMS) variable capacitor, comprising:

(a) first and second actuation electrodes being spaced apart, and at least one of the actuation electrodes being movable with respect to the other actuation electrode when a voltage is applied across the first and second actuation electrodes;

(b) a first capacitive electrode attached to and electrically isolated from the first actuation electrode; and

(c) a second capacitive electrode attached to and electrically isolated from the second actuation electrode and spaced from the first capacitive electrode for movement of at least one of the capacitive electrodes in a substantially straight direction with respect to the other capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes.

8. (New) The MEMS variable capacitor according to claim 7, wherein the first and second actuation electrodes are composed of a material selected from the

group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

9. (New) The MEMS variable capacitor according to claim 7, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

10. (New) The MEMS variable capacitor according to claim 7, comprising a plurality of tethers attaching the first and second capacitive electrodes to the first and second actuation electrodes, respectively, wherein the tethers are flexible for allowing movement of the capacitive electrodes with respect to one another.

11. (New) The MEMS variable capacitor according to claim 10, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

12. (New) The MEMS variable capacitor according to claim 10, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

13. (New) The MEMS variable capacitor according to claim 10, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the capacitive electrodes.

14. (New) The MEMS variable capacitor according to claim 10, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one of the actuation electrodes.

15. (New) The MEMS variable capacitor according to claim 7, comprising a movable component attached to the at least one movable actuation electrode and the movable at least one movable capacitive electrode.

16. (New) The MEMS variable capacitor according to claim 15, wherein the movable component electrically isolates the at least one movable actuation electrode and the at least one movable capacitive electrode.

17. (New) The MEMS variable capacitor according to claim 15, wherein the movable component includes tethers connecting the at least one movable actuation electrode and the at least one movable capacitive electrode.

18. (New) The MEMS variable capacitor according to claim 16, wherein the movable component comprises a first and second portion, wherein the first

portion is positioned further from the first actuation electrode than the second portion, wherein the first actuation electrode is attached to the first portion of the movable component, and wherein the first capacitive electrode is attached to the second portion of the movable component, wherein the distance between the actuation electrodes is larger by a factor of three or more than the distance between the capacitive electrodes.

19. (New) The MEMS variable capacitor according to claim 16, comprising a third actuation electrode and a third capacitive electrode attached to a side of the movable component opposing the at least one movable actuation electrode and the at least one movable capacitive electrode, wherein the third actuation electrode and third capacitive electrode are in electrical communication with the at least one movable actuation electrode and the at least one movable capacitive electrode, respectively.

20. (New) The MEMS variable capacitor according to claim 8, comprising a substrate attached to the second actuation electrode and the second capacitive electrode.

21. (New) The MEMS variable capacitor according to claim 20, wherein the substrate electrically isolates the second actuation electrode and the second capacitive electrode.

22. (New) The MEMS variable capacitor according to claim 20, wherein the substrate comprises a first and second portion, wherein the first portion is positioned further from the first actuation electrode than the second portion, wherein the second actuation electrode is attached to the first portion of the substrate, and wherein the second capacitive electrode is attached to the second portion of the substrate.

23. (New) The MEMS variable capacitor according to claim 20, wherein the second actuation electrode is buried in the substrate.

24. (New) The MEMS variable capacitor according to claim 20, wherein the substrate comprises one or more layers.

25. (New) The MEMS variable capacitor according to claim 8, wherein one of the capacitive electrodes comprises an aperture extending therethrough for ventilating a space between the capacitive electrodes.

26. (New) The MEMS variable capacitor according to claim 8, wherein the actuation electrodes or capacitive electrodes comprise isolation bumps positioned between the first and second electrodes or the first and second

capacitive electrodes for preventing contact of the first and second electrodes or the first and second capacitive electrodes.

27. (New) A method for varying the capacitance of two conductive plates, the method comprising:

(a) providing a micro-electro-mechanical system (MEMS) variable capacitor comprising:

(i) first and second actuation electrodes being spaced apart, and at least one of the actuation electrodes being movable with respect to the other actuation electrode when a voltage is applied across the first and second actuation electrodes;

(ii) a first capacitive electrode attached to and electrically isolated from the first actuation electrode; and

(iii) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for movement of at least one of the capacitive electrodes in a substantially straight direction with respect to the other capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes; and

(b) applying a voltage across the first and second actuation electrodes for moving the capacitive electrodes with respect to one another.

28. (New) The method according to claim 27, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

29. (New) The method according to claim 27, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

30. (New) The method according to claim 27, wherein the MEMS variable capacitor comprises a plurality of tethers attaching the first and second capacitive electrodes, wherein the tethers are flexible for allowing movement of the capacitive electrodes with respect to one another.

31. (New) The method according to claim 30, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

32. (New) The method according to claim 30, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

33. (New) The method according to claim 30, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the capacitive electrodes.

34. (New) The method according to claim 30, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the actuation electrodes.

35. (New) The method according to claim 27, wherein the MEMS variable capacitor comprises a movable component attached to the at least one movable actuation electrode and the movable at least one capacitive electrode.

36. (New) The method according to claim 35, wherein the movable component electrically isolates the at least one movable actuation electrode and the at least one movable capacitive electrode.

37. (New) The method according to claim 35, wherein the movable component comprises a first and second portion, wherein the first portion is positioned further from the first actuation electrode than the second portion, wherein the first actuation electrode is attached to the first portion of the movable component, and wherein the first capacitive electrode is attached to the second portion of the movable component.

38. (New) The method according to claim 35, wherein the MEMS variable capacitor comprises a third actuation electrode and a third capacitive electrode attached to a side of the movable component opposing the at least one movable actuation electrode and the at least one movable capacitive electrode, wherein the third actuation electrode and third capacitive electrode are in electrical communication with the at least one movable actuation electrode and the at least one movable capacitive electrode, respectively.

39. (New) The method according to claim 27, wherein the MEMS variable capacitor comprises a substrate attached to the second actuation electrode and the second capacitive electrode.

40. (New) The method according to claim 39, wherein the substrate electrically isolates the second actuation electrode and the second capacitive electrode.

41. (New) The method according to claim 39, wherein the substrate comprises a first and second portion, wherein the first portion is positioned further from the first actuation electrode than the second portion, wherein the second actuation electrode is attached to the first portion of the substrate, and wherein the second capacitive electrode is attached to the second portion of the substrate.

42. (New) The method according to claim 39, wherein the second actuation electrode is buried in the substrate.

43. (New) The method according to claim 39, wherein the substrate comprises one or more layers.

44. (New) The method according to claim 27, wherein one of the capacitive electrodes comprises an aperture extending therethrough for ventilating a space between the capacitive electrodes.

45. (New) The method according to claim 27, wherein the actuation electrodes or capacitive electrodes comprise isolation bumps positioned between the first and second electrodes or the first and second capacitive electrodes for preventing contact of the first and second electrodes or the first and second capacitive electrodes.

46. (New) A micro-electro-mechanical system (MEMS) variable capacitor, comprising:

(a) a movable component being movable with respect to a substrate and comprising a first and second portion, wherein the first portion is positioned further from the substrate than the second portion;

(b) first and second actuation electrodes being spaced apart, wherein the first actuation electrode is attached to the first portion of the movable component, wherein the second actuation electrode is attached to the substrate, and wherein the first actuation electrode is movable with respect to the second actuation electrode when a voltage is applied across the first and second actuation electrodes;

(c) a first capacitive electrode attached to the second actuation electrode; and

(d) a second capacitive electrode attached to the second portion of the movable component and spaced from the first capacitive electrode for movement of the first capacitive electrode with respect to the second capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes.

47. (New) The MEMS variable capacitor according to claim 46, wherein the first and second actuation electrodes are composed of a material selected from the

group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

48. (New) The MEMS variable capacitor according to claim 46, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

49. (New) The MEMS variable capacitor according to claim 46, comprising a plurality of tethers attaching the first and second capacitive electrodes, wherein the tethers are flexible for allowing movement of the capacitive electrodes with respect to one another.

50. (New) The MEMS variable capacitor according to claim 49, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

51. (New) The MEMS variable capacitor according to claim 49, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

52. (New) The MEMS variable capacitor according to claim 49, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the capacitive electrodes.

53. (New) The MEMS variable capacitor according to claim 49, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the actuation electrodes.

54. (New) The MEMS variable capacitor according to claim 46, comprising a movable component attached to the at least one movable actuation electrode and the movable at least one capacitive electrode.

55. (New) The MEMS variable capacitor according to claim 54, wherein the movable component electrically isolates the at least one movable actuation electrode and the at least one movable capacitive electrode.

56. (New) The MEMS variable capacitor according to claim 54, comprising a third actuation electrode and a third capacitive electrode attached to a side of the movable component opposing the at least one movable actuation electrode and the at least one movable capacitive electrode, wherein the third actuation electrode and third capacitive electrode are in electrical communication with

the at least one movable actuation electrode and the at least one movable capacitive electrode, respectively.

57. (New) The MEMS variable capacitor according to claim 46, comprising a substrate attached to the second actuation electrode and the second capacitive electrode.

58. (New) The MEMS variable capacitor according to claim 57, wherein the substrate electrically isolates the second actuation electrode and the second capacitive electrode.

59. (New) The MEMS variable capacitor according to claim 57, wherein the substrate comprises a first and second portion, wherein the first portion is positioned further from the first actuation electrode than the second portion, wherein the second actuation electrode is attached to the first portion of the substrate, and wherein the second capacitive electrode is attached to the second portion of the substrate.

60. (New) The MEMS variable capacitor according to claim 57, wherein the second actuation electrode is buried in the substrate.

61. (New) The MEMS variable capacitor according to claim 57, wherein the substrate comprises one or more layers.

62. (New) The MEMS variable capacitor according to claim 46, wherein one of the capacitive electrodes comprises an aperture extending therethrough for ventilating a space between the capacitive electrodes.

63. (New) The MEMS variable capacitor according to claim 46, wherein the actuation electrodes or capacitive electrodes comprise isolation bumps positioned between the first and second electrodes or the first and second capacitive electrodes for preventing contact of the first and second electrodes or the first and second capacitive electrodes.

64. (New) A method for varying the capacitance of two conductive plates, the method comprising:

(a) providing a micro-electro-mechanical system (MEMS) variable capacitor comprising:

(i) a movable component being movable with respect to a substrate and comprising a first and second portion, wherein the first portion is positioned further from the substrate than the second portion;

(ii) first and second actuation electrodes being spaced apart, wherein the first actuation electrode is attached to the first portion of the movable component, wherein the second actuation electrode is attached to the substrate, and wherein the first actuation electrode is movable with respect to the second actuation electrode when a voltage is applied across the first and second actuation electrodes;

(iv) a first capacitive electrode attached to the second actuation electrode; and

(v) a second capacitive electrode attached to the second portion of the movable component and spaced from the first capacitive electrode for movement of the first capacitive electrode with respect to the second capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes; and

(b) applying a voltage across the first and second actuation electrodes.

65. (New) The method according to claim 64, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combination thereof.

66. (New) The method according to claim 64, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

67. (New) The method according to claim 64, comprising a plurality of tethers attaching the first and second capacitive electrodes, wherein the tethers are flexible for allowing movement of the capacitive electrodes with respect to one another.

68. (New) The method according to claim 67, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

69. (New) The method according to claim 67, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

70. (New) The method according to claim 67, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the capacitive electrodes.

71. (New) The method according to claim 67, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the actuation electrodes.

72. (New) The method according to claim 64, wherein the MEMS variable capacitor comprises a third actuation electrode and a third capacitive electrode attached to a side of the movable component opposing the at least one movable actuation electrode and the at least one movable capacitive electrode, wherein the third actuation electrode and third capacitive electrode are in electrical communication with the at least one movable actuation electrode and the at least one movable capacitive electrode, respectively.

73. (New) The method according to claim 64, wherein the MEMS variable capacitor comprises a substrate attached to the second actuation electrode and the second capacitive electrode.

74. (New) The method according to claim 73, wherein the substrate electrically isolates the second actuation electrode and the second capacitive electrode.

75. (New) The method according to claim 73, wherein the substrate comprises a first and second portion, wherein the first portion is positioned further from the

first actuation electrode than the second portion, wherein the second actuation electrode is attached to the first portion of the substrate, and wherein the second capacitive electrode is attached to the second portion of the substrate.

76. (New) The method according to claim 73, wherein the second actuation electrode is buried in the substrate.

77. (New) The method according to claim 73, wherein the substrate comprises one or more layers.

78. (New) The method according to claim 64, wherein one of the capacitive electrodes comprises an aperture extending therethrough for ventilating a space between the capacitive electrodes.

79. (New) The method according to claim 64, wherein the actuation electrodes or capacitive electrodes comprise isolation bumps positioned between the first and second electrodes or the first and second capacitive electrodes for preventing contact of the first and second electrodes or the first and second capacitive electrodes.

80. (New) A micro-electro-mechanical system (MEMS) variable capacitor, comprising:

(a) first and second actuation electrodes being spaced apart, wherein the first actuation electrode is movable with respect to the second actuation electrode when a voltage is applied across the first and second actuation electrodes;

(b) a first capacitive electrode attached to the first actuation electrode; and

(c) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for movement of the first capacitive electrode with respect to the second capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes, wherein the capacitive electrodes are spaced closer to one another than the actuation electrodes.

81. (New) The MEMS variable capacitor according to claim 80, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

82. (New) The MEMS variable capacitor according to claim 80, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

83. (New) The MEMS variable capacitor according to claim 80, comprising a plurality of tethers attaching the first and second capacitive electrodes, wherein the tethers are flexible for allowing movement of the capacitive electrodes with respect to one another.

84. (New) The MEMS variable capacitor according to claim 83, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

85. (New) The MEMS variable capacitor according to claim 83, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

86. (New) The MEMS variable capacitor according to claim 83, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the capacitive electrodes.

87. (New) The MEMS variable capacitor according to claim 83, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the actuation electrodes.

88. (New) The MEMS variable capacitor according to claim 80, comprising a movable component attached to the at least one movable actuation electrode and the movable at least one capacitive electrode.

89. (New) The MEMS variable capacitor according to claim 88, wherein the movable component electrically isolates the at least one movable actuation electrode and the at least one movable capacitive electrode.

90. (New) The MEMS variable capacitor according to claim 88, wherein the movable component comprises a first and second portion, wherein the first portion is positioned further from the first actuation electrode than the second portion, wherein the first actuation electrode is attached to the first portion of the movable component, and wherein the first capacitive electrode is attached to the second portion of the movable component.

91. (New) The MEMS variable capacitor according to claim 88, comprising a third actuation electrode and a third capacitive electrode attached to a side of the movable component opposing the at least one movable actuation electrode and the at least one movable capacitive electrode, wherein the third actuation electrode and third capacitive electrode are in electrical communication with the at least one movable actuation electrode and the at least one movable capacitive electrode, respectively.

92. (New) The MEMS variable capacitor according to claim 80, wherein one of the capacitive electrodes comprises an aperture extending therethrough for ventilating a space between the capacitive electrodes.

93. (New) The MEMS variable capacitor according to claim 80, wherein the actuation electrodes or capacitive electrodes comprise isolation bumps positioned between the first and second electrodes or the first and second capacitive electrodes for preventing contact of the first and second electrodes or the first and second capacitive electrodes.

94. (New) A method for varying the capacitance of two conductive plates, the method comprising:

(a) providing a micro-electro-mechanical system (MEMS) variable capacitor comprising:

(i) first and second actuation electrodes being spaced apart, wherein the first actuation electrode is movable with respect to the second actuation electrode when a voltage is applied across the first and second actuation electrodes;

(ii) a first capacitive electrode attached to the first actuation electrode; and

(iii) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for movement of the first capacitive electrode with respect to the second capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes, wherein the capacitive electrodes are spaced closer to one another than the actuation electrodes; and

(b) applying a voltage across the first and second actuation electrodes.

95. (New) The method according to claim 94, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

96. (New) The method according to claim 94, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

97. (New) The method according to claim 94, wherein the MEMS variable capacitor comprises a plurality of tethers attaching the first and second

capacitive electrodes, wherein the tethers are flexible for allowing movement of the capacitive electrodes with respect to one another.

98. (New) The method according to claim 97, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

99. (New) The method according to claim 97, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

100. (New) The method according to claim 97, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the capacitive electrodes.

101. (New) The method according to claim 97, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of at least one the actuation electrodes.

102. (New) The method according to claim 94, wherein the MEMS variable capacitor comprises a movable component attached to the at least one

movable actuation electrode and the movable at least one capacitive electrode.

103. (New) The method according to claim 102, wherein the movable component electrically isolates the at least one movable actuation electrode and the at least one movable capacitive electrode.

104. (New) The method according to claim 102, wherein the movable component comprises a first and second portion, wherein the first portion is positioned further from the first actuation electrode than the second portion, wherein the first actuation electrode is attached to the first portion of the movable component, and wherein the first capacitive electrode is attached to the second portion of the movable component.

105. (New) The method according to claim 102, wherein the MEMS variable capacitor comprises a third actuation electrode and a third capacitive electrode attached to a side of the movable component opposing the at least one movable actuation electrode and the at least one movable capacitive electrode, wherein the third actuation electrode and third capacitive electrode are in electrical communication with the at least one movable actuation electrode and the at least one movable capacitive electrode, respectively.

106. (New) The method according to claim 94, wherein one of the capacitive electrodes comprises an aperture extending therethrough for ventilating a space between the capacitive electrodes.

107. (New) The method according to claim 94, wherein the actuation electrodes or capacitive electrodes comprise isolation bumps positioned between the first and second electrodes or the first and second capacitive electrodes for preventing contact of the first and second electrodes or the first and second capacitive electrodes.

108. (New) A micro-electro-mechanical system (MEMS) variable capacitor, comprising:

(a) first and second actuation electrodes being spaced apart, and the first actuation electrode being movable with respect to the second actuation electrode when a voltage is applied across the first and second actuation electrodes;

(b) a first capacitive electrode attached to and at least partially mechanically decoupled from the first actuation electrode in a rotational direction; and

(c) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for movement of the first capacitive electrode in a substantially straight direction with

respect to the other capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes.

109. (New) The MEMS variable capacitor according to claim 108, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

110. (New) The MEMS variable capacitor according to claim 108, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

111. (New) The MEMS variable capacitor according to claim 108, comprising a movable component comprising a first and second portion, wherein the first actuation electrode is attached to the first portion, and wherein the first capacitive electrode is attached to the second portion.

112. (New) The MEMS variable capacitor according to claim 111, wherein the first and second portions of the movable component are at least partially mechanically decoupled in a rotation direction.

113. (New) The MEMS variable capacitor according to claim 112, wherein the movable component comprises a third and fourth portion connecting the first and second portions of the movable component for providing flexibility to the movable component for movement of the first portion in the substantially straight direction while the second portion rotates.

114. (New) The MEMS variable capacitor according to claim 113, wherein the second portion is at least partially surrounded by the first portion.

115. (New) The MEMS variable capacitor according to claim 113, wherein the first capacitive electrode is attached to a surface of the second portion, and wherein the surface is square, hexagonal, or circular shaped.

116. (New) The MEMS variable capacitor according to claim 113, comprising a plurality of tethers attaching the third portion of the movable component, wherein the tethers are flexible for allowing movement of the third portion with respect to the second capacitive electrode.

117. (New) The MEMS variable capacitor according to claim 116, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

118. (New) The MEMS variable capacitor according to claim 116, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

119. (New) The MEMS variable capacitor according to claim 116, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of the first capacitive electrode.

120. (New) The MEMS variable capacitor according to claim 108, wherein the first capacitive electrode are mechanically decoupled for rotation around a gap positioned between the first capacitive electrode and the first actuation electrode.

121. (New) A method for varying the capacitance of two conductive plates, the method comprising:

(a) providing a micro-electro-mechanical system (MEMS) variable capacitor comprising:

(i) first and second actuation electrodes being spaced apart, and the first actuation electrode being movable with respect to the second actuation electrode when a voltage is applied across the first and second actuation electrodes;

(ii) a first capacitive electrode attached to and at least partially mechanically decoupled from the first actuation electrode in a rotational direction; and

(iii) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for movement of the first capacitive electrode in a substantially straight direction with respect to the other capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes; and

(b) applying a voltage across the first and second actuation electrodes.

122. (New) The method according to claim 121, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

123. (New) The method according to claim 121, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

124. (New) The method according to claim 121, wherein the MEMS variable capacitor a movable component comprising a first and second portion, wherein the first actuation electrode is attached to the first portion, and wherein the first capacitive electrode is attached to the second portion.

125. (New) The method according to claim 124, wherein the first and second portions of the movable component are at least partially mechanically decoupled in a rotation direction.

126. (New) The method according to claim 125, wherein the movable component comprises a third and fourth portion connecting the first and second portions of the movable component for providing flexibility to the movable component for movement of the first portion in the substantially straight direction while the second portion rotates.

127. (New) The method according to claim 126, wherein the second portion is at least partially surrounded by the first portion.

128. (New) The method according to claim 126, wherein the first capacitive electrode is attached to a surface of the second portion, and wherein the surface is square, hexagonal, or circular shaped.

129. (New) The method according to claim 126, wherein the MEMS variable capacitor comprises a plurality of tethers attaching the third portion of the movable component, wherein the tethers are flexible for allowing movement of the third portion with respect to the second capacitive electrode.

130. (New) The method according to claim 129, wherein the tethers are operable to produce a biasing force to oppose movement of capacitive electrodes with respect to one another.

131. (New) The method according to claim 129, wherein the tethers are composed of material selected from the group consisting of silicon, alumina, silica, polymers, and combinations thereof.

132. (New) The method according to claim 129, wherein at least one of the tethers extends substantially perpendicular to a radial direction from about the center of the first capacitive electrode.

133. (New) A micro-electro-mechanical system (MEMS) variable capacitor, comprising:

(a) first and second actuation electrodes being spaced apart, and at least one of the actuation electrodes being movable when a voltage is applied across the first and second actuation electrodes;

(b) a first capacitive electrode attached to and electrically isolated from the first actuation electrode;

(c) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for movement of at least one of the capacitive electrodes with respect to the other capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes; and

(d) first and second torsional beams for providing resistance to movement of the first and second capacitive electrodes with respect to one another, wherein each torsional beams include a first and second end, wherein the torsional beams are fixed to one another at the first end, and wherein the torsional beams extend in a substantially opposing directions to the second end and are attached to the second capacitive electrode.

134. (New) The MEMS variable capacitor according to claim 133, wherein the torsional beams are composed of a material selected from the group consisting of silica, alumina, un-doped semiconductors, polymers, non-conductive material, and combinations thereof.

135. (New) The MEMS variable capacitor according to claim 133, wherein the first and second actuation electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

136. (New) The MEMS variable capacitor according to claim 133, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

137. (New) A method for varying the capacitance of two conductive plates, the method comprising:

(a) providing a micro-electro-mechanical system (MEMS) variable capacitor comprising:

(i) first and second actuation electrodes being spaced apart, and at least one of the actuation electrodes being movable when a voltage is applied across the first and second actuation electrodes;

(ii) a first capacitive electrode attached to and electrically isolated from the first actuation electrode;

(iii) a second capacitive electrode attached to the second actuation electrode and spaced from the first capacitive electrode for

movement of at least one of the capacitive electrodes with respect to the other capacitive electrode upon application of voltage across the first and second actuation electrodes to change the capacitance between the first and second capacitive electrodes; and

(iv) first and second torsional beams for providing resistance to movement of the first and second capacitive electrodes with respect to one another, wherein each torsional beams include a first and second end, wherein the torsional beams are fixed to one another at the first end, and wherein the torsional beams extend in a substantially opposing directions to the second end and are attached to the second capacitive electrode; and

(b) applying a voltage across the first and second actuation electrodes for moving the capacitive electrodes with respect to one another.

138. (New) The method according to claim 137, wherein the torsional beams are composed of a material selected from the group consisting of silica, alumina, un-doped semiconductors, polymers, non-conductive material, and combinations thereof.

139. (New) The method according to claim 137, wherein the first and second actuation electrodes are composed of a material selected from the group

consisting of metal, semi-metal, doped semiconductor, and combinations thereof.

140. (New) The method according to claim 137, wherein the first and second capacitive electrodes are composed of a material selected from the group consisting of metal, semi-metal, doped semiconductor, and combinations thereof.